IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Thomas C. Terwilliger Docket No.: S-96,583

Serial No.: Examiner:

Filed : Art Unit:

For : METHOD FOR REMOVING ATOMIC-MODEL BIAS IN MACROMOLECULAR CRYSTALLOGRAPHY

#2
Plunkett
5/4/02

Commissioner for Patents
Washington, DC 20231

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.56, 1.97, AND 1.98

Sir:

The documents listed below, copies attached, may be material to the examination of the subject application and is therefore submitted in compliance with the duty of disclosure defined in 37 CFR 1.56.

1. Roversi et al., "Modeling Prior Distribution of Atoms for Macro-molecular Refinement and Completion," Acta Cryst. (2000), D56, pp.1316-1323.
2. Wang et al., "Crystal Structure Determination of Escherichia coli ClpP Starting from an EM-Derived Mask," Journal of Structural Biology, 124, pp. 151-163 (1998).

CERTIFICATE OF MAILING/TRANSMISSION (37 CFR 1.8(a))

I hereby certify that this correspondence is, on the date shown below, being:

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☒ deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the: Commissioner for Patents, Washington, DC 20231.

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Signature

Date 12-12-01

Ray G. Wilson
(type or print name of person certifying)

3. Beran et al., "Simulated Annealing for Phasing Using Spatial Constraints," Acta Cryst. (1995). A51, 20-27.
4. van der Plas et al., "Ab Initio Phasing in Protein Crystallography," Proc of SPIE, (2000) 4123, pp. 249-260.
5. Read, "Improved Fourier Coefficients for Maps Using Phases form Partial Structures with Errors," Acta Cryst. (1986), A42, pp. 140-149.
6. Cowtan et al., "Improvement of Macromolecular Electron-Density Maps by the Simultaneous Application of Real and Reciprocal Space Constraints," Acta Cryst. (1993), D49, pp. 148-157.
7. Terwilliger, "Maximum-likelihood Density Modification," Acta Cryst. (2000), D56, pp. 956-972.
8. Terwilliger, "Reciprocal-space Solvent Flattening," Acta Cryst. (1999), D55, pp. 1863-1871.
9. Szoke, "Holographic Methods in X-ray Crystallography, II, Detailed Theory and Connection to Other Methods of Crystallography," Acta Cryst., (1993), A49, 853-866.
10. Maalouf, "Holographic Methods in X-ray Crystallography, III. First Numerical Results," Acta Cryst., (1993), A49, 866-871.
11. Beran, "Simulated Annealing for Phasing using Spatial Constraints," Acta Cryst., (1995), A51, 20-27.
12. Szoke et al., "Holographic Methods in X-ray Crystallography, IV. A Fast Algorithm and its Application to Macromolecular Crystallography," Acta Cryst., (1995), A51, 691-708.
13. Szoke et al., "Holographic Methods in X-ray Crystallography, V. Multiple Isomorphous Replacement, Multiple Anomalous Dispersion and Non-crystallographic Symmetry," Acta Cryst., (1997), A53, 291-313.
14. Szoke, "Use of Statistical Information in X-ray Crystallography with Application to the Holographic Method," Acta Cryst., (1998), A54, 543-562.

15. Wang, "Resolution of Phase Ambiguity in Macromolecular Crystallography," Methods in Enzymology, Vol. 115, pp. 90-113, 1985.
16. Xiang et al., "Entropy Maximization Constrained by Solvent Flatness: a New Method for Macromolecular Phase Extension and Map Improvement," International Union of Crystallography, D49, pp. 193-212, 1993.
17. Bricogne, "Maximum Entropy and the Foundations of Direct Methods," International Union of Crystallography, A40, pp. 410-445, 1984.
18. Bricogne, "A Bayesian Statistical Theory of the Phase Problem. 1. A Multichannel Maximum-Entropy Formalism for Constructing Generalized Joint Probability Distribution of Structure Factors, A44, pp. 517-545, (1988).
19. Terwilliger et al., "Automated MAD and MIR Structure Solution", International Union of Crystallography, D55, pp. 849-861, (1999).
20. Lunin "Electron-Density Histograms and the Phase Problem," International Union of Crystallography, D49, pp. 90-99, (1993).
21. Drenth, "Principles of Protein X-Ray Crystallography," Springer-Velag New York, (1994), pp. 1-19.

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional matter material to the examination of this application does not exist, or that any one or more of these citations constitutes prior art under 35 U.S.C. 102.

It is requested that the above citations be made of record in the prosecution of this application.

Respectfully submitted,

Date: 12-12-01

Signature of Attorney

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Revised 10/01/01

Form PTO-1449 (Modified) U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No. S-96,583	Serial No.
INFORMATION DISCLOSURE STATEMENT BY APPLICANT	Applicant(s) Thomas C. Terwilliger	
37 CFR 1.98(b)	Filing Date	Group

U.S. PATENTS DOCUMENTS

EXAMINER INITIAL	PATENT NUMBER	ISSUE DATE	PATENTEE	CLASS	SUB CLASS	FILING DATE

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	PATENT NUMBER	ISSUE DATE	COUNTRY	CLASS	SUB CLASS	Translation YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)

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